Rural Wisconsin Health Cooperative

May 1,2007

Commission's Secretary
Office of the Secretary
Federal Communications Commission
9300 East Hampton Drive
Capital Heights, MD 20743

Dear Secretary,

Enclosed please find the Rural Wisconsin Health Cooperative Consortium FCC Rural Healthcare Pilot Program application. **The FCC docket number for this application is WC Docket No. 02-60.**

Any questions related to this application can be answered by Louis Wenzlow (contact information below).

Sincerely,

Louis Wenzlow, Director of Health Information Technology
Phone: 608-644-3237
E-mail: Iwenzlow@,rwhc.com

Enclosure

cc—Erika Olsen, Thomas Buckley, Jeremy Marcus

No. of Copies rec'd 0+4
List ABCDE

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FCC Rural Healthcare Pilot Program Application for the Rural Wisconsin Health Cooperative Consortium

***1. Identify* the organization that will be legally and financially responsible for the conduct of activities supported by the fund:**

Rural Wisconsin Health Cooperative (Background):
Incorporated in 1979, the Rural Wisconsin Health Cooperative receives national recognition as one of the country's earliest and most successful models for networking among rural hospitals. RWHC serves as a catalyst for regional collaboration and as an aggressive, creative force on behalf of rural communities and rural health. Owned and operated by the 31 member hospitals, RWHC offers a wide range of shared services that meet local community health needs, including: staffing, consulting, management, networking and education. Specific services include: HCAHPS submission, managed care contracting, credentials verification, quality indicators, recruitment services, legal services, clinical services, peer review, financial/coding consultation, health information technology consulting, and over 35 professional roundtables. The majority of RWHC members are located in south central and mid-Wisconsin but active members represent communities throughout the state. The collective strength of RWHC members also enables the Cooperative to be an effective advocate for rural health at the local, state and national level.

RWHC brings an impressive portfolio of networking and information technology resources to this effort. In 2002, the Cooperative built the RWHC Wide Area Network (WAN), a frame relay network that was developed in response to the significant challenges rural providers face when trying to implement IT or telehealth projects. By pooling resources and partnering with an established, regional telecommunications carrier (Norlight Telecommunications), RWHC has been able to create a robust telecommunications infrastructure that allows for high performance and secure connectivity. The network includes a variety of security features, such as redundant firewalls, authentication, security auditing, and virus scanning and filtering mechanisms. Centralized administration and 24/7 technical support are available through Norlight and the network data center, which is housed in Madison, WI.

Currently, over 30 hospitals, clinics, regional providers, and others are connected to the WAN, including the rural hospitals participating in this application. Most of these "early adopters" were attracted to the greatly reduced rates for the basic services available through the network, including: high-speed Internet access, e-mail and e-mail encryption services, data system backup (with remote vaulting) services, video conferencing capabilities, and scalable bandwidth for existing connections to regional providers. This was made possible by aggregating the volumes of the participating entities and bringing economies of scale to bear. The main attraction for the regional providers and service vendors that connected to the network was the opportunity to provide services to a large number of rural providers through a single high speed connection to the WAN, rather than maintaining multiple connections to individual entities.

Since December 2003, RWHC has focused on developing more mission-critical applications using the WAN, such as teleradiology/PACS, telehealth services, electronic health records, and other shared HIT services. Current telemedicine and related WAN

uses include: (1) radiology, cardiology and echo image transmissions, (2) lab ordering and resulting between connected facilities, (3) distance education via video-conferencing and Mediasite technology, and (4) telepsychiatry in development as part of an OAT Grant project. See additional information in the "previous experience" section.

The diagram in Appendix A depicts the current RWHC WAN, including the established connections to the rural hospitals and their urban partners. Participating entities have the option of connecting with each other directly for extant relationships, or passing through the router/firewall/CSU for shared serviceslapplications. **All** of the rural-based providers connected to the **WAN** have taken advantage *of* Universal Service Fund credits through the Rural Health Care Division *of* the *FCC,* with RWHC providing technical assistance and guidance to the members during the application process.

Alternative Applicant:
While the Rural Wisconsin Health Cooperative is owned and operated by thirty one 501(c)3 hospitals, it is legally structured as a cooperative and is not a 501(c)3 organization. We strongly believe that the Pilot Program will/should allow for RWHC to serve as the applicant organization, but we wish to ensure application acceptance by applying in the alternative in case RWHC does not qualify.

Rural Wisconsin Information Technoloav Network Consortium (with St. Joseph's Community Health Services serving as lead applicant. if a lead applicant is required):
This consortium consists of all facilities that will be participating in telemedicine and/or Shared EHR functions of the expanded RWHC wide area network. All participants are 501(c)3 hospitals. The Consortium includes the following facilities:

Rural Facilities
- St. Joseph's Community Health SVCS. (Hillsboro, WI): **Shared EHR Facility**
- Memorial Hospital of Lafayette County (Darlington, WI): **Shared EHR Facility**
- Memorial Community Hospital (Edgerton, WI): **Shared EHR Facility**
- Moundview Memorial Hospital (Friendship, WI): **Shared EHR Facility**
- Tomah Memorial Hospital (Tomah, WI): **Shared EHR Facility**
- Vernon Memorial Hospital (Viroqua, WI): **Shared EHR Facility**
- Richland Hospital (Richland, WI): **Shared EHR Facility**
- Boscobel Area Health Care (Boscobel, WI): **Shared EHR Facility**
- Grant Regional Health Center (Lancaster, WI): **Teleradiology/security**
- Reedsburg Area Medical Center (Reedsburg, WI): **Telecardiologylsecurity**
- Hess Memorial Hospital (Mauston, WI): **Existing WAN Participant**
- Southwest Health Center (Platteville, WI): **Existing WAN/security**
- Memorial Medical Center (Neillsville, WI): **Existing WAN/security**
- Divine Savior Healthcare (Portage, WI): **Existing WAN/security**

Urban Facilities
- University of Wisconsin Health Services (Madison, WI): **Existing WAN Participant**
- Meriter Health Services (Madison, Wisconsin): **Existing WAN Participant**
- St. Mary's Hospital (Madison, Wisconsin): **Potential WAN Participant**

Contact Information: For more information related to this application please contact Louis Wenzlow, Director of Health Information Technology, Rural Wisconsin Health

Cooperative ***Address:*** 880 Independence Lane P.O. Box 490, Sauk City, Wisconsin 53583 **Phone:** (608) 644-3237 E-mail: lwenzlow@rwhc.com

2. Identify the goals and objectives of the proposed network:

Shared EHR Project (Background):
In October of 2004, AHRQ awarded a THQIT (Transforming Healthcare Quality through Health Information Technology) one year planning grant to a collaborative of Wisconsin healthcare organizations, both rural and urban, whose goal was to begin work toward applying existing technology to health care to reap rewards in improving the quality of care and efficiency of the delivery system in Wisconsin. Among the objectives identified in the planning project's Implementation Framework were the following: "to implement cooperative applications and data sharing initiatives among participating organizations;" and "to demonstrate the benefits of collaborative application development and electronic connectivity through improvements in: the quality *of* patient care and service; *provider*-patient relationships, continuity of care, patient safety, and improved delivery system efficiency."

In January of 2006, following the conclusion of the THQIT planning process, the Rural Wisconsin Health Cooperative organized a subset of THQIT planning group participants into the Shared EHR Taskforce, which was charged with engaging in a vendor selection process that would lead to the development of a multi-facility, rural-focused, electronic health record (EHR) environment, to include a shared hospital information system (HIS), a shared physician practice EMR system, and data exchange capabilities between these systems. After over a year of structured vendor evaluation sessions, granular functional-capability comparisons, RFP development, onsite visits, and business planning, a group of eight RWHC hospitals is poised to move forward to a Shared EHR implementation phase.

As facilities begin to use telecommunications to access EHR systems, the dependability, stability, and security of these systems (and the communication systems over which they are accessed) become critical. Shared EHR and FCC Pilot Program planners aim to address these issues by (1) implementing a redundant server/datacenter configuration, (2) protecting against network downtime by expanding the current network to create redundant connections for all Shared EHR participants, and (3) enhancing the security features of the WAN.

Other Telemedicine (Background):
In addition to the Shared EHR project, other developments have been putting pressure on the RWHC WAN. As WAN users have begun to implement computerized radiography (CR), 16 (and now even 64) slice CT scanners, and PACS, the size and quantity of images sent over the WAN have mushroomed, leading to users adding T I lines or else needing to put up with slow transmission rates. Upcoming telemedicine (including planned telepsychiatry, teledermatology, and possibly telepharmacy applications) and distance education needs promise to create additional bandwidth issues.

Network Goals and Objectives:
To address the issues raised above, RWHC Rural Healthcare Pilot Program planners have identified the following network goals and objectives:

1. Using the current RWHC WAN as a starting point, create a fully redundant/ expanded WAN for those facilities participating in the Shared EHR Project
    - Redundant datacenters to be implemented as one strategy for achieving this goal
    - Redundant connectivity to be implemented as another strategy for achieving this goal
    - Accomplishing this will require contracting with a telecommunications company that can provide end-to-end connectivity redundant of existing T I connections

2. Expand the current network to include additional rural facilities and urban tertiary centers, with the goal of creating a larger regional network and more connectivity and data exchange options for WAN participants
    - 3 rural hospitals that currently access the WAN over the Internet will be added to the WAN (Reedsburg (telecardiology), Lancaster (teleradiology), and Tomah (Shared EHR) with dedicated connections
    - 7 hospitals (in addition to Tomah) will be adding high speed redundant connections required for Shared EHR (These 7 hospitals have indicated they are "likely" Shared EHR participants; final commitments are pending)
    - St. Mary's, a referral center of many existing WAN participants, is still in the process of considering a WAN connection. They are included in the budget, but will be removed if they decide not to participate. St. Mary's participation would mean that all three Madison large hospitals would be on the WAN, and would significantly expand connectivity option for many current and new WAN members, including teleradiology and a variety of other telemedicine options

3. Enhance WAN security features for new and existing WAN participants
    - Network design and budget will include an advanced firewall configuration for redundant datacenters
    - Network design and budget will include advanced intrusion detection and bandwidth monitoring and apportionment systems for datacenters and 13 WAN facilities, along with a shared intrusion detection report analyzer

4. Enhance distance education and video-conferencing capabilities between WAN participants, especially those engaged in Shared EHR
    - Budget will include video-bridging equipment to facilitate this goal
    - Budget will include connection to Internet 2 in order for WAN participants to access high-bandwidth continuing education/outreach programming from UW Medical Schools of Medicine and Nursing, Medical College of Wisconsin, and Marquette Dentistry School. Specific use cases will be developed in year 1 of the project, and connectivity will be established in year 2.

5. Promote flexible flow of data/information between WAN participants, as opposed to a proprietary referral-based network configuration
    - The RWHC WAN was established to mitigate the need for inefficient point-to-point connections that lock in referral relationships benefiting referral centers at the expense of rural providers and their patients

Shared EHR Goals and Objectives:
Broader goals and objectives that pilot program funding will help the implementing group to accomplish include:

1. Financial Objectives
    - Contain datacenter, hardware, software, implementation, support, and operating costs with group volume purchasing and a shared data center model
    - Contain support costs and improve support quality with collaborative HIT staff
    - Develop and utilize financial/efficiency ROI metrics

2. Clinical Objectives
    - Provide rural providers with advanced clinical systems such as E-MAR, CPOE, handheld rounding, decision support, e-prescribing, and medication verification through barcoding, as well as a single sign-on portal view of the patient chart
    - Provide rural providers with a migration path to a paperless clinical environment
    - Provide rural providers with an integrated hospital and ambulatory (physician clinic) environment
    - Provide rural patients with patient empowerment tools (such as patient portals)
    - Expand current telemedicine initiatives, in order to provide rural patients with access to a wider range of specialty services closer to home
    - Facilitate efficient quality reporting
    - Develop and utilize QI ROI metrics

3. Regional Objectives
    Provide robust data exchange capabilities for shared system participants
    - Position participants for vendor neutral data exchange as standards and data exchange mechanisms emerge
    - Facilitate continuity of care with tertiary centers
    - Enhance public health and epidemiology partnership capabilities
    - Provide ROI, QI, and best practice data for other rural hospitals that engage in EHFUHIS related activities

Request for Exemption **to** Competitive **Bidding** Process:
Given the goals identified in this section (especially the need for end to end connectivity redundant of existing T I connections), Pilot Program planners have identified Charter Communications as the optimal contractor for this network expansion; as Charter is the only Wisconsin network provider that can provide both the high speed connections and the redundant end-to-end connectivity. For the purposes of budgeting, the Consortium has worked with Charter to identify costs related to network expansion

If exemption is allowed, the expanded WAN will add a Charter network to the current Norlight configuration, providing redundancy along with significantly higher bandwidth levels and a choice between telecommunication providers. In the few cases where Charter does not service the communities with participant facilities, Charter will develop an alternate "final-mile" solution, whether that's a wireless link or a partnership with a local provider.

3. Estimate the network's total costs for each year:

Estimated costs associated with network development and expansion:

Year 1 Total:	$1,178,016
Year 1 Requested (85%):	$1,001,313
Year 2 Total:	$696,520
Year 2 Requested (85%):	$592,042

A detailed budget and budget explanation are provided in Section 9

4. Describe how for-profit network participants will pay their fair share of the network costs:

Only non-profit organizations will participate in the Pilot Program. For-profit organizations may connect to the network, paying their full installation and connectivity costs, as well as a network participation fee to cover their fair share of the network backbone costs.

5. *Identify* the source of financial support and anticipated revenues that will pay for costs not covered by the fund:

Pilot program participants will pay 15% of their installation, connectivity, and hardware costs over and above the 85% covered by the program.

6. List the health care facilities that will be included in the network:

Rural Facilities

- St. Joseph's Community Health SVCS. (Hillsboro, WI): Shared EHR Facility
- Memorial Hospital of Lafayette County (Darlington, WI): Shared EHR Facility
- Memorial Community Hospital (Edgerton, WI): Shared EHR Facility
- Moundview Memorial Hospital (Friendship, WI): Shared EHR Facility
- Tomah Memorial Hospital (Tomah, WI): Shared EHR Facility
- Vernon Memorial Hospital (Viroqua, WI): Shared EHR Facility
- Richland Hospital (Richland, WI): Shared EHR Facility
- Boscobel Area Health Care (Boscobel, WI): Shared EHR Facility
- Grant Regional Health Center (Lancaster, WI): Teleradiology/security
- Reedsburg Area Medical Center (Reedsburg, WI): Telecardiologylsecurity
- Hess Memorial Hospital (Mauston, WI): Existing WAN Participant
- Southwest Health Center (Platteville, WI): Existing WANlsecurity
- Memorial Medical Center (Neillsville, WI): Existing WANlsecurity
- Divine Savior Healthcare (Portage, WI): Existing WAN/security

Urban Facilities

- University of Wisconsin Health Services (Madison, WI): Existing WAN Participant
- Meriter Health Services (Madison, Wisconsin): Existing WAN Participant
- St. Mary's Hospital (Madison, Wisconsin): Potential WAN Participant

7. Provide the address, zip code, Rural Urban Commuting Area (RUCA) code and phone number for each health care facility participating in the network:

- St. Joseph's Community Health SVCS. (Hillsboro, WI):
  - Address: 400 Water Avenue, PO Box 527, Hillsboro, WI
  - Zip code: 54634
  - RUCA code: 10.0
  - Phone number: 608-489-8000
- Memorial Hospital of Lafayette County (Darlington, WI):
  - Address: 800 Clay Street, Darlington, WI
  - Zip code: 53530
  - RUCA code: 10.0
  - Phone number: 608-776-4466
- Memorial Community Hospital (Edgerton, WI):
  - Address: 313 Stoughton Road, Edgerton, WI
  - Zip code: 53534
  - RUCA code: 2.0
  - Phone number: 608-884-3441
- Moundview Memorial Hospital (Friendship, WI):
  - Address: 402 West Lake Street, PO Box 40, Friendship, WI
  - Zip code: 53934
  - RUCA code: 10.0
  - Phone number: 608-339-3331
- Tomah Memorial Hospital (Tomah, WI):
  - Address: 321 Butts Avenue, Tomah, WI
  - Zip code: 54660
  - RUCA code: 7.0
  - Phone number: 608-372-2181
- Vernon Memorial Hospital (Viroqua, WI):
  - Address: 507 South Main Street, Viroqua, WI
  - Zip code: 54665
  - RUCA code: 7.0
  - Phone number: 608-637-2101
- Richland Hospital (Richland, WI):
  - Address: 333 East Second, Richland Center, WI
  - Zip code: 53581
  - RUCA code: 7.0
  - Phone number: 608-647-6321
- Boscobel Area Health Care (Boscobel, WI):
  - Address: 205 Parker Street, Boscobel, WI
  - Zip code: 53805
  - RUCA code: 7.0
  - Phone number: 608-375-4112
- Grant Regional Health Center (Lancaster, WI):
  - Address: 507 S Monroe Street, Lancaster, WI
  - Zip code: 53813
  - RUCA code: 7.0
  - Phone number: 608-723-2143
- Reedsburg Area Medical Center (Reedsburg, WI):
  - Address: 2000 North Dewey, Reedsburg, WI
  - Zip code: 53959

- RUCA code: 7.4
- Phone number: 608-524-6487

- Hess Memorial Hospital (Mauston, WI):
  - Address: 1050 Division Street, Mauston, WI
  - Zip code: 53948
  - RUCA code: 7.0
  - Phone number: 608-847-6161
- Southwest Health Center (Platteville, WI):
  - Address: 1400 Eastside Road, Platteville, WI
  - Zip code: 53818
  - RUCA code: 4.0
  - Phone number: 608-348-2331
- Memorial Medical Center (Neillsville, WI):
  - Address: 216 Sunset Place, Neillsville, WI
  - Zip code: 54456
  - RUCA code: 10.0
  - Phone number: 608-743-3101
- Divine Savior Healthcare (Portage, WI):
  - Address: 2817 New Pinery Road, Portage, WI
  - Zip code: 53901
  - RUCA code: 7.3
  - Phone number: 608-742-4131
- University of Wisconsin Health Services (Madison, WI):
  - Address: 1552 University Avenue, Madison, WI
  - Zip code: 53715
  - RUCA code: *1.0*
  - Phone number: 608-265-5600
- Meriter Health Services (Madison, Wisconsin):
  - Address: 202 South Park Street, Madison, WI
  - Zip code: 53715
  - RUCA code: 1.0
  - Phone number: 608-267-6000
- St. Mary's Hospital (Madison, Wisconsin): ***Potential Participant***
  - Address: 707 South Mills Street, Madison, WI
  - Zip code: 53715
  - RUCA code: 1.0
  - Phone number: 608-251-6100

8. Indicate previous experience in developing and managing telemedicine programs:

Rural Network Building Experience

Tim Size—RWHC Executive Director

Tim Size, a nationally known expert on rural health network development, has an M.B.A. degree in Health Administration from the University of Chicago, and Bachelors Degrees in Biomedical Engineering and Computer Mathematics from Duke University and the University of Chicago. Mr. Size is the founder and has served as the executive director of the Rural Wisconsin Health Cooperative (RWHC) since its inception in 1979. He is widely published and has served on dozens of state and federal committee, boards, and other appointments, including the following quality focused initiatives: Leapfrog's Rural

Workgroup; the Wisconsin Patient Safety Institute Board; the Wisconsin Quality Initiative Steering Committee; the National Voluntary Consensus Standards for Hospitals: Priority Areas Steering Committee; the IOM Committee on The Future of Rural Health Care; the National Advisory Committee on Rural Health and Human Services; the National Quality Forum, and the Wisconsin eHealth Quality and Patient Safety Financing Workgroup. In 2002, Mr. Size received the Louis Gorin Award for Outstanding Achievement in Rural Health Care from the National Rural Health Association.

Examples of past collaborative partnerships and successes directed by Mr. Size include: major grant awards from the W.K. Kellogg Foundation (1983) and the Robert Wood Johnson Foundation (1988) relating to rural health network development initiatives; a Federal Outreach Grant award (2000) on behalf of three county health departments and five rural hospitals to address health promotion and disease/injury prevention within agricultural communities; and the Reedsburg Area Medical Center THQIT planning project, "Developing Shared EHR Infrastructure in Wisconsin" (reference section 2), in which Mr. Size served as the Principal Investigator.

Mr. Size has taken a leadership role in IT and QI projects pursued by RWHC over the years, including the development of a Wide Area Network (WAN) that services the Internet, data encryption/security, and data storage needs of a number of the project participants; and the development of a rural-focused HCAHPS patient satisfaction service that is utilized by over twenty critical access hospitals. He has done so with the strong support of the RWHC Board of Directors (comprised of the thirty one CEOs of RWHC member hospitals). Through his role at the RWHC, one of the most successful examples of rural provider networking in the country, Tim has worked closely with group member CEOs, CFOs, nurse executives, and others, over a period of nearly three decades, including through monthly Board meetings that often serve as educational forums on issues related to rural healthcare, quality improvement, and information technology.

Electronic Health Record (EHR) Implementation Experience

Louis *Wenzlow—RWHC* Director *of* Health *Information Technology*

Supplementing Mr. Size's experience in the HIT arena, Louis Wenzlow serves as the RWHC Director of Health Information Technology, and brings significant experience in the realm of HIT implementation in the rural context. Before taking his position at RWHC, Mr. Wenzlow served as the Director of Information Technology at Reedsburg Area Medical Center, an RWHC member. There he led a variety of patient safety related EHR system implementations, including CPOE, medication verification through barcoding, and Pyxis medication dispensing (interfaced to the e-MAR); and served as the HIPAA Security Taskforce Chair. As Director of HIT at the Rural Wisconsin Health Cooperative, his mission is to spearhead collaborative health information technology projects for member hospitals; in this capacity, he facilitates the Shared EHR Taskforce. He currently serves on the Wisconsin Doctors Office Quality — Information Technology (DOQ-IT) Advisory Board, the Wisconsin e-Health Initiative Information Exchange Workgroup, and is co-Chair of the Rural Health Resource Center's Rural Underserved HIT Coalition. Mr. Wenzlow participates in all RWHC Board meetings, as well as in RWHC Information Technology Roundtable meetings. Through his Shared EHR Taskforce work, he has become intimately familiar with participant HIT positions, and he is actively working with participants to plan for their transition to EHR environments, including providing detailed readiness assessments and strategic planning assistance,

and working with participant end-users, directors (clinical, ancillary, financial, etc.), physicians, administrative teams, and facility boards.

Telemedicine Proaram Experience

In 2004, the Rural Wisconsin Health Cooperative RWHC) and the Wisconsin Primary Health Care Association received a Congressionally-mandatedgrant from the Office for the Advancement of Telehealth (OAT) so that nine rural hospitals and three community health centers could establish the necessary human, technical and financial infrastructure for a sustainable telehealth/telemedicine program. The funding was used to build a videoconferencing network that now connects multiple sites, thereby enabling rural hospitals and clinics to access a wide range of telehealth services, focusing on mental health and distance education.

RWHC provided connectivity options and technical support through the RWHC Wide Area Network & Data Center, and helped develop comprehensive business plan that included: program objectives and outcomes, cost-benefit analysis, specific mental health services to be provided, potential sources of revenue, and a timeline for implementation. RWHC presented the business plan and the results from a prior needs assessment to the clinical and executive officers of the participating organizations. They were asked to decide whether the proposed telehealth services fit with their respective mission statements.

To implement the plan, the project participants decided to reorganize as the Wisconsin Telehealth Services Network (WTSN) – a loose affiliation of rural hospitals, community health centers, regional providers, and academic centers that was charged with pursuing a variety of telehealth applications through videoconferencing. In the past eighteen months, WTSN has had some success establishing telehealth connections between patients, hospitals, clinics, and corrections facilities. Distance education has been a primary driver in sustaining the network.

9. Provide a project management plan outlining the project's leadership and management structure, as well as its work plan, schedule, and budget:

Leadership and r t ıatio

This project will be c . . . s bv ouis ızlow ıral Wis Health Cooperative Director of Health Information Technology, and Kierre Fiske, RWHC IT Manage;. Mr. Wenzlow will be responsible for working with consortium members to coordinate planning activities (including establishing final connectivity and hardware installation timelines and schedules), and for all required Pilot Program project administration and communication. Kierre Fiske will be responsible for overseeing the technical aspects of the project (i.e. working with vendors and assisting in the implementation of all Pilot Program hardware). Each Consortium member will designate a facility contact who will work with the project coordinators to implement the Pilot Program connectivity and hardware designated for their facility.

Kierre Fiske currently manages the RWHC Wide Area Network and will continue to do so after network expansion.

Details related to leadership, management, and timelines of projects the Pilot Program network will support (i.e. Shared EHR and Wisconsin Telehealth Services Network) are available upon request.

Project Timeline (Graphic)
Refer to Appendix D

Work Plan and Schedule

Topic	Item	Due Date	p/Individuals bl
1. Network Design Study Completed	RWHC and consulting WAN engineers develop detailed expanded WAN/expanded security specifications	10/07	RWHC/Louis Wenzlow
2. Kickoff Meeting	Shared EHR and expanded WAN participants meet to finalize schedule/work plan	10107	All Participants
3. Network Backbone	Equipment and installation ordered.	11/07	RWHC/Kierre Fiske
4. Shared EHR Participants	Group 1 installation and redundancy equipment ordered	11/07	RWHC/Facility Contact
5. Other Participants	Installation ordered	11/07	RWHC/Facility Contact
6. Continuing Education use cases meeting	Group to discuss Internet 2 use cases and develop plan for proceeding	1/08	RWHC/Louis Wenzlow
7. Network Backbone	Communications go-live between redundant sites	02/08	RWHC/Kierre Fiske
8. Shared EHR Datacenter	Production server installed at production datacenter	02/08	RWHC/Kierre Fiske

9. Shared EHR Participants	Group 1 communications and redundancy go-live	02/08	RWHC/Facility Contact
10. Other Participants	Communications go-live	02/08	RWHC/Facility Contact
11. Shared EHR Datacenter	Redundant server installed at secondary datacenter	02/08	RWHC/Kierre Fiske
12.Shared EHR Participants	Group 2 installation and redundancy equipment ordered	02/08	RWHC/Facility Contact
13. Continuing Education	Continuing education use cases finalized	04/08	RWHC/Louis Wenzlow
14. Continuing Education	Internet 2 connectivity ordered	05/08	RWHC/Kierre Fiske
15.Shared EHR Participants	Group 2 communications and redundancy go-live	08/08	RWHC/Facility Contact
15. Continuing Education	Internet ***2*** connectivity go-live	08/08	RWHC/Kierre Fiske
15.Shared EHR Participants	Intrusion detection devices installed	**1**1/08	RWHC/Facility Contact
16. Other Participants	Intrusion detection devices installed	11/08	RWHC/Facility Contact
17. Network Backbone	Video conferencing bridge installed	02/09	RWHC/Kierre Fiske

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Rural Pilot Program
Year 1 Budget

Network Backbone Costs	
Incurred design study costs	5,000
Additional design study costs	10,000
Primary datacenter network hardware	
Local networking equipment (firewall router and switch)	10,000
Ongoing maintenance	1,200
Network monitoring hardware (Fortinet)	8,000
Ongoing maintenance	900
Network redundalicy hardware (Radware)	10,000
Ongoing maintenance	1,200
Secondary datacenter/support center	
Local networking equipment(firewall muter and switch)	10,000
Ongoing maintenance	1,200
Network monitoring hardware (Fortinet)	8,000
Ongoing maintenance	900
Network redundancy hardware (Radware)	10,000
Ongoing maintenance	1,200
Network Backbone Total	77,600

Connectivity Costs	Installation	Annual Connectivity
Shared EHR redundant datacenters (100 meg)	500	17,270
Hillsboro (10 meg)	1,500	54,200
Friendship (10 meg)	1,500	84,200
Tomah (10 meg)	500	32,640
Viroqua (10 meg)	3,000	30,000
Darlington (10 meg)	5,500	75,600
Edgerton (10 meg)	500	22,200
Richland Center (10 meg)	500	26,880
Boscobel (10 meg)	500	22,200
Reedsburg (10 meg)	500	27,600
Lancaster (10 meg)	1,500	61,200
St. Mary's (20 meg)–Potential Participant	385	10,800
Connectivity Totals	16,385	151,790

Shared EHR Connectivity Failover Hardware	
Network Redundancy Hardware (Radware) far 8 facilities	80,000
Ongoing maintenance	9,600
Shared EHR Connectivity Failover Hardware Total	89,600
Shared EHR Datacenter Hardware	
Redundant Servers	510,000
Ongoing Maintenance	26,641
Shared EHR Datacenter Total	536.641

Totals From Above	
Network Backbone	77,600
Connectivity Casts	
Installation	16,385
Annual Connectivity	457,790
Connectivity Failover Hardware	89,600
Shared EHR Datacenter Hardware	536,641
Total Year 1 Costs	**1,178,016**
Year 1 Request (85% Of total)	1,001,313

Rural Pilot Program
Year 2 Budget

Network Backbone Costs	
Video Conferencing Bridge	50,000

Connectivity Costs	Annual Connectivity
	17270
	64,200
	64,200
	32,640
	30,000
	75,800
	22,200
	26,880
	22,200
	27,600
	64,200
	10,800
	457,790

Intrusion Detection and Bandwidth Monitoring	
Fortinet devices for 13 facilities+ Shared Analyzer	121,000
Ongoing maintenance	15,000
Intrusion Detection and Bandwidth Monitoring Total	136,000
Internet 2 Connectivity and Support	
Wisenet quote for 14 facilities	60, 000

(Totals From Above	
Network Backbone	60,000
Connectivity Costs	
Installation	0
Annual Connectivity	440,520
ID/Bandwidth Monitoring	136,000
Internet 2	60,000
Total Year 2 Costs	**696,520**
Year2 Request (85% of total)	532,042

Budget Explanation:
Consistent with identified project goals, the Pilot Program Consortium is focusing on the following cost categories:

- High speed connectivity that provides redundancy. These costs are further divided into installation and annual connectivity costs, and are based on quotes provided by Charter Communication. Even though connectivity will be phased in over time per Shared EHR and other telehealth project needs, we are assuming that each site will be awarded two full years of connectivity costs. These are costs that would be covered by Universal Service Funds if the Pilot Program were not available
- Network backbone costs required for redundant datacenter and connectivity to the shared datacenters. These costs are based on (1) best available quotes for required hardware (firewalls, routers, switches, Radware, Fortinet intrusion detection/bandwidth apportionment devices, shared analyzer, and a video bridge to facilitate video conferencing communications between Shared EHR sites), (2) accounting of time spent on network planning work to date, and (3) an estimate of time required for network design work still required.
- Redundant connectivity failover devices (Radware) provided to 8 Shared EHR participants. These costs are based on quotes provided by Radware sellers
- Intrusion detection and bandwidth monitoring hardware (Fortinet) for network security and bandwidth apportionment provided *to* 13 hospital participants. These costs are based on quotes provided by Fortinet sellers. Planners have identified Fortinet as the most economical option to meet participant needs
- Shared EHR hardware that will provide the Shared EHR applications from the shared datacenters
    - This cost item is the servers required for the Shared EHR Initiative. Software and installation costs, which make up the vast majority of Shared EHR costs, are not being requested. The redundant server (hardware) portion of the Shared EHR project is an integral component of the network design and, along with the actual network, is the foundation from which telemedicine (EHR) services can be provided. Costs are based on quotes received by the Shared EHR vendor
- Internet 2 costs are based on quotes provided by Wiscnet (Wisconsin's Internet 2 provider), and include connectivity costs, Internet 2 yearly charges, and Wiscnet yearly charges

10. Indicate how the telemedicine program will be coordinated throughout the state or region:

Shared EHR:
The Shared EHR rollout strategy involves a three phased approach of (1) rolling out quality HIS implementations to initial participants, (2) expanding services to these participants, and (3) growing the ITN customer base.

Establishing Initial Implementations:
Because EHR implementations are multi-phased projects that can take several years *to* complete, the Shared EHR project will initially focus on successfully implementing the initial group of participants (projected at 8 hospitals; identified in Section 6). Shared

EHR support staff will be phased in over the initial two to three year implementation period, during which financial, ancillary, clinical, and physician practice systems, along with implementation procedures and support mechanisms, will be fully established.

The goals of this phase are to develop a high quality support team that enhances the value of the Shared EHR, to develop replicable standards that make the implementation and support process more economical, and to establish superlative levels of participant satisfaction.

Expanding Services *to Initial* Participants:
As founding participant EHR implementations get off the ground, the Shared EHR consortium will be exploring additional product and service opportunities for these participants. Example of such opportunities include a shared dictation system, shared PACS, a common Citrix environment that could significantly reduce LAN support costs, a data exchange service, and other applications to benefit participants and expand the Rural Wisconsin Information Technology Network's offerings.

Growing the Shared *EHR* Participant Base:
Even as the above two phases are underway, preparation for broader participation by interested not-for-profit Wisconsin healthcare providers will be initiated through the development of a website, by publicizing the project at national and state conferences, and through ongoing networking with RWHC members and other Wisconsin hospitals and physician practices.

Other Telemedicine:
The Wisconsin Telehealth Services Network (WTSN) has engaged the following tertiary/academic centers in discussions around telehealth collaboration and partnership: University of Wisconsin Hospital & Clinics, Gundersen Lutheran, and Marshfield Clinic. At first, it was difficult to get the regional providers to the table, presumably because they didn't see much of a business case for engaging in telehealth services. But WTSN kept reinforcing the clinical and economic advantages to both hub and spoke sites, and during the past few months there has been a dramatic turnaround. The most significant player to date has been the Marshfield clinic, which is on the verge of opening up all forty of their clinical telehealth services to the WTSN sites.

The details for this and other statewide relationships are currently under development.

11. Indicate to what extent the network can be self-sustaining once established:

Shared EHR:
Shared EHR planners have devoted over a year to an intensive vendor selection, vendor negotiation, and business planning process that accounts for all costs associated with the project and demonstrates on average a 25% savings with the collaborative model over standalone implementation of the same vendor's system(s). Shared EHR project participants will be signing 5 year service agreements that will guarantee the networks sustainability, with each participant committing to paying their fair share of Shared EHR costs, including connectivity costs and the other costs identified in this proposal.

Due to the high cost of high speed connectivity in rural areas, Universal Service Funds will remain important to keeping connectivity costs on par with the cost of connectivity in

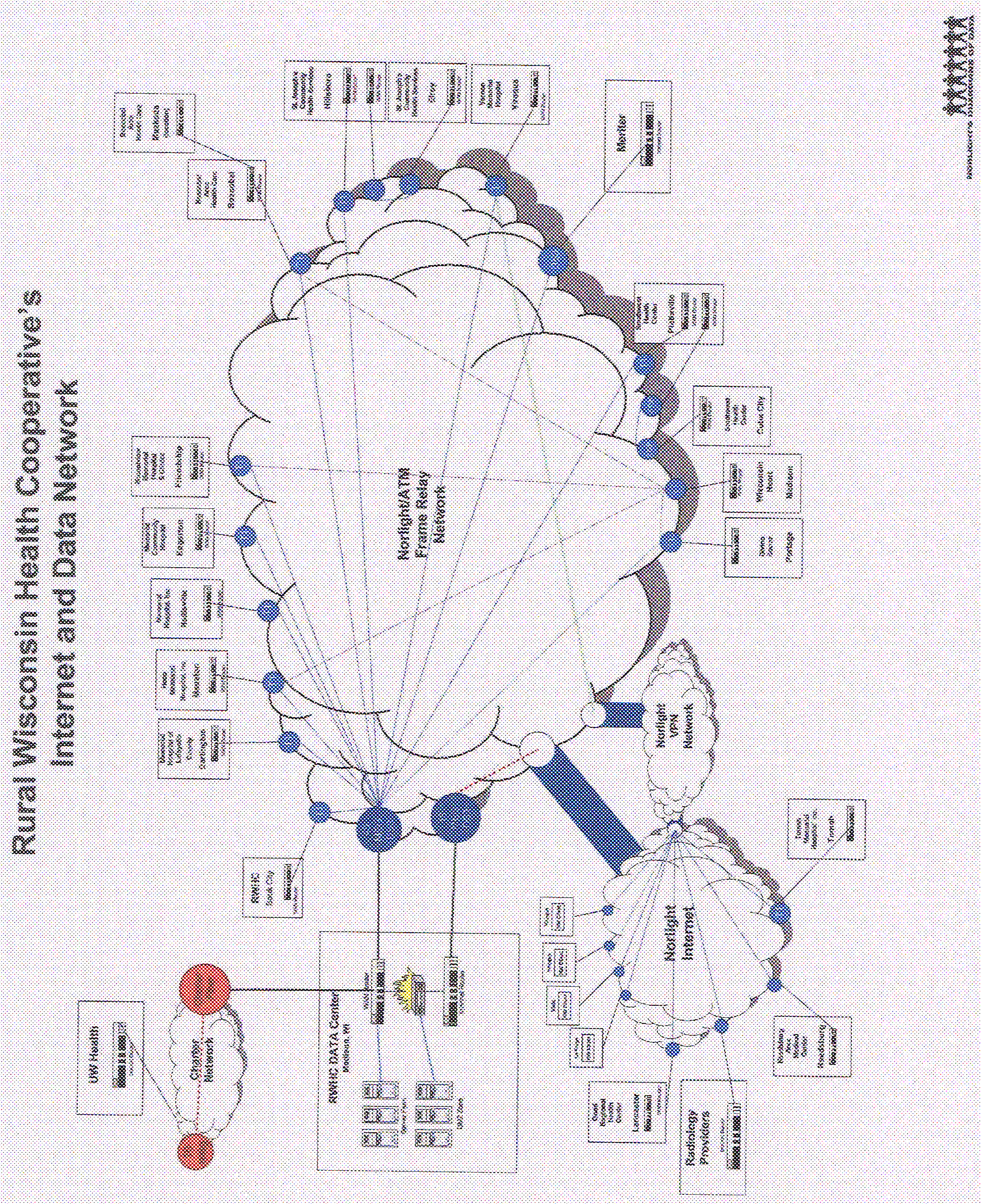
urban areas. Even without Universal Service Funds, the Shared EHR project planners have shown enough cost savings to guarantee indefinite sustainability.

Other Telemedicine:
Ongoing expenses often prove to be a significant challenge in the continued operation of telehealth networks. In response, WTSN formed an alliance to gain a broader base of support, and share the costs for equipment, maintenance, personnel, and transmission systems. WTSN members enjoy greater purchasing power when they share costs for equipment, maintenance, personnel, and network transmission. Transmission expenses for monthly recurring access, usage, and bridging service are prorated based on each site's monthly activity.

Federal/State/private funds, third-party reimbursement, and service contracts have been critical in sustaining the WTSN network. (In Wisconsin, Medicaid reimburses for telepsychiatry services.) Network participants have also taken advantage of the Universal Service Program for Rural Health Providers. Going forward, WTSN will rely on multiple funding streams in addition to the ones identified above, including: network user fees, grant funding, hospitals billing for ancillary services, and the recruitment of new members. Administrative and educational use of the network in addition to the clinical usage, will also lend itself to a sustainable model.

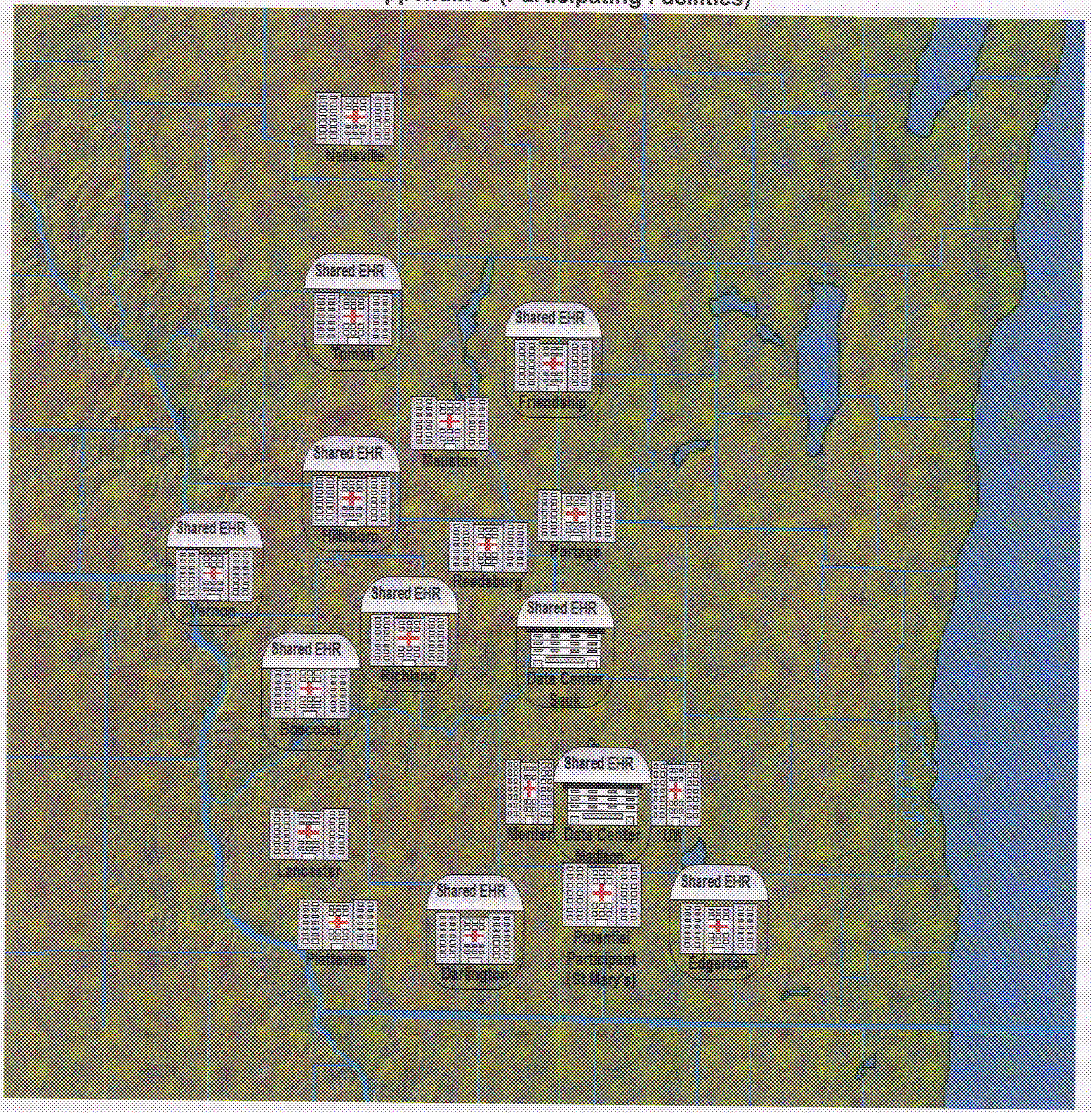
Revenues, though not always tangible in these cases, should be calculated as best as can be determined and offered as real cost savings to the business model. The group also believes that multiple usage of the network infrastructure is the key to sustainability. This allows for the subsidization of the non-revenue generating applications by applications capable of producing revenue.

Appendix A (Existing Network)



Appendix B (Expanded Network)

Appendix C (Participating Facilities)



Appendix D (Graphic Timeline of FCC Pilot Program's relationship to Shared EHR Initiative)